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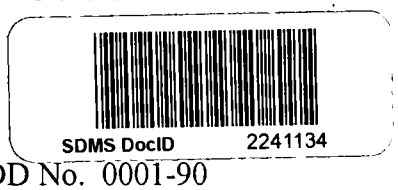
ORIGINAL

SITE ASSESSMENT TECHNICAL ASSISTANCE

EPA CONTRACT 68-S5-3002

3 March 2000



Mr. Mike Towle (3HS31)
On-Scene Coordinator
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, PA 19103-2029

TDD No. 0001-90
DCN F0000102

Subject: 12th Street Landfill Site - Data Quality Report

Dear Mr. Towle:

Enclosed for your review is the data quality report for the soil samples collected on 14 February 2000 from the 12th Street Landfill Site. Please feel free to contact me at (215) 238-0338, Ext. 243, regarding any aspect of this report.

Very truly yours,

ROY F. WESTON, INC.

(b) (4) [redacted]

Analytical Data Reviewer

cc: TDD File

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1.0 INTRODUCTION

This report provides a general review of the analytical data package submitted by Compuchem in Cary, North Carolina, for five soil samples collected at the 12th Street Landfill Site on 14 February 2000. The samples were received at Compuchem on 15 February 2000. The analyses requested were target compound list (TCL) semivolatile organics (SVOA), TCL pesticides and polychlorinated biphenyls (Pest/PCB) and target analyte list (TAL) metals.

2.0 ANALYTICAL METHODOLOGY

The soil, sediment, grain and surface water samples were analyzed for TCL SVOAs and Pest/PCBs in accordance with the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program (CLP) Statement of Work (SOW) OLM04.2 and the TAL metals were analyzed in accordance with CLP SOW ILM04.0

3.0 DATA REVIEW COMMENTS

3.1 Chain-of-Custody

Signed chain-of-custody records were returned.

3.2 Semivolatile Organics (SVOA)

- The holding times for the samples met quality control (QC) criteria.
- The gas chromatograph/mass spectrometer (GC/MS) tuning data and internal standard met QC criteria.
- The initial calibration and continuing calibration met QC criteria.
- The method blank was free of target contaminants. There was a tentatively identified compound (TIC) at retention time (RT) 4.87 identified as unknown. The laboratory coded this TIC as "JB" in all the samples. Qualify the unknown TIC at RT 4.87 coded "JB" by the laboratory as "B" or blank contamination.
- The surrogate spike recoveries met QC criteria.
- The matrix spike/matrix spike duplicate (MS/MSD) recoveries and relative percent difference (RPD) values met QC criteria.

- The laboratory had to manually separate benzo(b)fluroanthene and benzo(k)fluoranthene for Sample SS-37. The laboratory coded the benzo(b)fluroanthene and benzo(k)fluoranthene results for Sample SS-37 as "XJ." Qualify the benzo(b)fluroanthene and benzo(k)fluoranthene results for Sample SS-37 coded "XJ" by the laboratory as "J" or approximate.

Accept the SVOA data as presented with the above qualifiers.

3.3 Pesticide/Polychlorinated Biphenyls (Pest/PCBs)

- The holding times for the samples were met.
- The initial and continuing calibration data met QC criteria.
- The method blank contained heptachlor and dieldrin. The heptachlor results for Samples SS-34, SS-35 and SS-36 and the dieldrin results for Samples SS-35 and SS-36 were less than five times the blank concentration. Qualify the heptachlor results for Samples SS-34, SS-35 and SS-36 and the dieldrin results for Samples SS-35 and SS-36 as "B" or blank contamination. Other compounds coded with a "B" in the code were not blank contamination and the "B" should be removed.
- The MS/MSD recoveries and RPD values met QC criteria.
- The surrogate spike recoveries for decachlorobiphenyl were above QC criteria on both columns for Sample SS-34. All the results for Sample SS-34 were qualified as "J" or "B" and data were not further qualified
- The second column confirmation results exceeded 25 %D for several compounds in several samples. The laboratory coded all Pest/PCB results whose %D exceeded 25% with a "JP," "BP," "JB," "JBP" or "P." Qualify all Pest/PCB results coded "JP," "BP," "JB," "JBP" or "P" by the laboratory as "J" or approximate, unless the compound was already qualified as "B."

Accept all Pest/PCB data as presented with the exceptions above.

3.4 TAL Metals

- The holding times for the samples were met.
- The method blanks and/or continuing calibration blanks contained beryllium. Beryllium was detected in Samples SS-34, SS-35, SS-36 and SS-37 at concentrations less than five times the blank concentration. Qualify the beryllium result for Samples SS-34, SS-35, SS-36 and SS-37 as "B" or blank contamination.
- The initial and continuing calibration data met QC criteria.

- The inductively coupled plasma (ICP) interference checks and laboratory control sample recoveries met QC criteria.

- The ICP serial dilution did not meet QC criteria for potassium. Qualify the potassium results for all the samples as "J" or approximate.

- The MS/MSD recoveries for antimony, manganese and nickel were below QC criteria, and the selenium MS recovery was 0%. Qualify the manganese results for all the samples and the antimony results for Samples SS-34, SS-35, SS-36 and SS-37 as "L" or biased low. Qualify the antimony result for Sample BG-04 as "UL" or quantitation limit biased low. Qualify the selenium results for Samples SS-36 and BG-04 as "R" or unreliable. The remaining results were qualified because the RPD value did not meet QC criteria, as discussed below.

- The RPD values for copper, lead, nickel and selenium did not meet QC criteria. Qualify the copper, lead and nickel results for all the samples and the selenium results for Samples SS-34, SS-35 and SS-37 as "J" or approximate. The remaining selenium results were qualified previously and data were not further qualified.

- The contract required detection limit (CRDL) recoveries were above QC criteria for mercury, lead and selenium and below QC criteria for selenium, thallium and zinc. The mercury results for Samples SS-36 and SS-37 were less than two times the CRDL; therefore, qualify the mercury results for Samples SS-36 and SS-37 as "K" or biased high. The remaining results were greater than two times the CRDL or were previously qualified and data were not further qualified.

Accept the metals data as presented with the exception above.

4.0 CONCLUSION

This analytical data package was reviewed in accordance with the EPA Quality Assurance/Quality Control Guidance for Removal Activities, EPA/540/6-90/004, April 1990. Accept the data as presented with the following qualifiers:

- Qualify the unknown SVOA TIC at RT 4.87 coded "JB" by the laboratory as "B" or blank contamination.

- Qualify the benzo(b)fluroanthene and benzo(k)fluoranthene results for Sample SS-37 coded "XJ" by the laboratory as "J" or approximate.

- Qualify the heptachlor results for Samples SS-34, SS-35 and SS-36 and the dieldrin results for Samples SS-35 and SS-36 as "B" or blank contamination. Other Pest/PCB compounds coded with a "B" in the code were not blank contamination and the "B" should be removed.

- Qualify all Pest/PCB results coded "JP," "BP," "JB," "JBP" or "P" by the laboratory as "J" or approximate, unless the compound was already qualified as "B."
- Qualify the beryllium result for Samples SS-34, SS-35, SS-36 and SS-37 as "B" or blank contamination.
- Qualify the potassium results for all the samples as "J" or approximate.
- Qualify the manganese results for all the samples and the antimony results for Samples SS-34, SS-35, SS-36 and SS-37 as "L" or biased low.
- Qualify the antimony result for Sample BG-04 as "UL" or quantitation limit biased low.
- Qualify the selenium results for Samples SS-36 and BG-04 as "R" or unreliable.
- Qualify the copper, lead and nickel results for all the samples and the selenium results for Samples SS-34, SS-35 and SS-37 as "J" or approximate.
- Qualify the mercury results for Samples SS-36 and SS-37 as "K" or biased high.